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## A NEW SONORELLA FROM THE SALT RIVER MOUNTAINS OF PHOENIX, ARIZONA

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SONORELLA SUPERSTITIONIS TAYLORI new subspecies. Page 59, fig. 2.

*Description:* Shell depressed-globose, heliciform, small, thin, light-tan, with a dark-brown spiral band on the well-rounded shoulder; umbilicate, the umbilicus contained about 6 times in the diameter. Embryonic shell of about  $1\frac{1}{2}$  whorls roughened by radial wrinkles and superimposed papillae; the papillae punctate on the first half whorl, becoming elongate, hyphen-like, and occasionally anastomosing into spirally descending threads over the remainder of the embryonic whorls. Post embryonic whorls roughened by irregular growth wrinkles and numerous punctate papillae becoming fainter and sparser on the body whorl but extending over the base and into the umbilicus. Periostracum silky-lustrous. The last whorl descends slightly and gradually to the scarcely expanded peristome; aperture oblique, rounded, slightly wider than high, with margins converging; parietal callus very thin.

*Holotype measurements:* Height 7.2 mm., max. diam. 14.2 mm.; umbilicus 2.3 mm.; whorls  $4\frac{1}{4}$ .

The body wall of the animal is dark grey anteriorly, becoming lighter posteriorly. The mucus gland papillae on the mantle collar are light brownish-white; no trace of orange mucus was noted on the mantle collar. The sole of the foot is light orange-brown and there is a tinge of orange pigment on the tail of the foot.

Genitalia of holotype (Fig. 1, A): The moderately long penis is enveloped in a long, thin penial sheath which has a short, swollen, muscular base. It contains a short, stout, annulated,

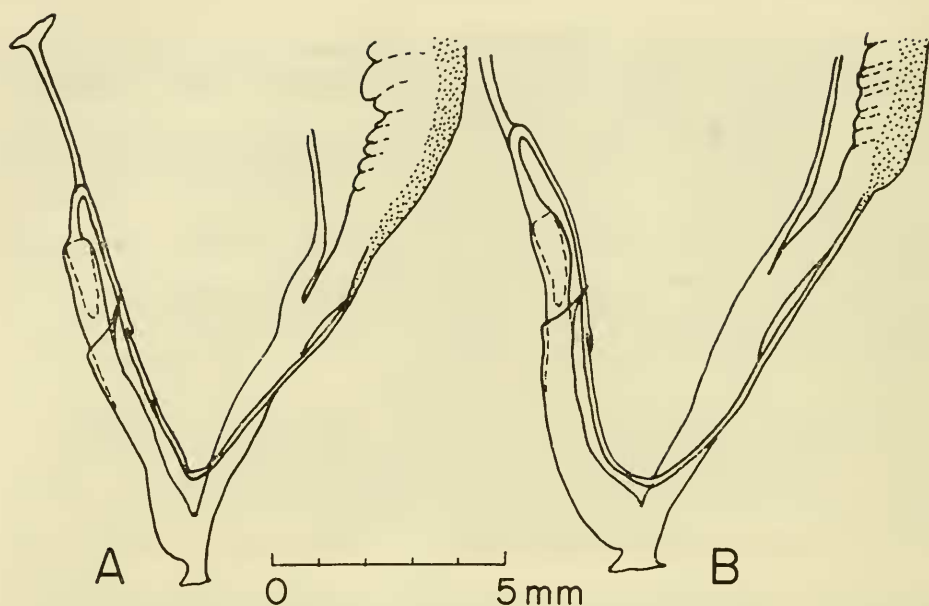


Fig. 1. Lower genitalia. A. Holotype, *Sonorella superstitionis taylori* W. B. Miller. B. *S. superstitionis superstitionis* Pilsbry, #4933-B, Boulder Canyon, Superstition Mts., Arizona. Drawings made from stained whole mounts arranged to facilitate comparison of corresponding organs. Note close similarities in size and shape of structures.

conical verge. A short epiphallus, about  $\frac{2}{3}$  the length of the penis bears a very short, barely detached epiphallic caecum. The penial retractor is inserted on the epiphallus near the penis. Vagina nearly as long as the penis; free oviduct very short, less than  $\frac{1}{3}$  as long as the vagina.

*Type locality:* Salt River Mts. (South Mountain Park), Maricopa Co., Arizona, in igneous rock piles on the south side of canyon at west end of Guadalupe Road at a point 2.6 road miles west of S. 56th St. Elev. ca. 1500 ft. (Holotype, W. B. Miller, 9 Feb., 1968. Paratypes, D. W. Taylor & Paul Gabaldon, 3 Oct., 1967; W. B. Miller, 9 Feb., 1968; J. T. Bagnara & W. B. Miller, 29 Feb., 1968). Holotype ANSP. (314851). Paratypes in collections of ANSP. (314852), Dept. of Biological Sciences, University of Arizona (3126), and the author (5009, 5043, 5047).

This subspecies [illustrated Oct. 1968, vol. 82, no. 2, p. 59, fig. 2 a-c] is very small and superficially resembles *S. allynsmithi* Gregg & Miller [see next article] which is found on the north side of Phoenix in the Phoenix Mts. Its habitat is equally hot and arid as that of *allynsmithi*. It differs conspicuously in shell sculpture, however, presenting a rough surface of growth wrinkles and super-

Measurements of Genitalia, in mm.	Holotype	Paratype 5009-A
Penis	6.8	7.0
Verge	1.5	2.0
Penial Sheath	5.0	4.5
Epiphallus	4.0	5.5
Epiphallic caecum	0.2	0.2
Vagina	5.0	5.0
Free Oviduct	1.5	1.5
Spermathecal Duct	16.0	16.0

imposed punctate papillae. In the genitalia, it differs from *allynsmithi* by having a short but prominent and stout verge. The size and shape of the verge, the lengths and proportions of penis, penial sheath, and vagina are similar to those of *S. superstitionis superstitionis*, figure 1B, some 40 miles to the east, along the Salt River, in the northern foothills of the Superstition Mts. (Boulder Canyon at Canyon Lake).

It differs from *S. superstitionis superstitionis* Pilsbry by its significantly smaller shell diameter, wider umbilicus, and somewhat rougher sculpture on the post-embryonic whorls. The embryonic sculptures are similar. In a lot of 9 *S. s. superstitionis* from Boulder Canyon, the shell diameter ranged from 16.8 to 18.7 mm.; the holotype, according to Pilsbry, measures 19.3 mm. In the type lot of 34 adult *S. s. taylori*, the shell diameter ranged from 12.5 to 14.6 mm.

*S. s. taylori* is named after Dwight W. Taylor, friend and distinguished malacologist, who collected the first live adult specimen.

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